

EXHIBITS PRESENTED

**By Town of Abita Springs and
Concerned Citizens of St. Tammany**

November 12, 2014

**BEFORE THE
LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION**

IN THE MATTER OF:

**Helis Oil & Gas Co., LLC
Application for Drilling Permit**

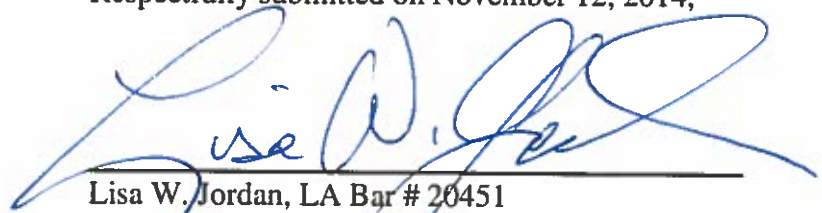
**Eads Poitevent et al No. 1 Well
Lacombe Bayou Field**

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* Docket No. 14-626
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**SUPERVISING ATTORNEY'S INTRODUCTION OF STUDENT
ATTORNEYS AND NOTICE OF APPROVAL OF STUDENT
APPEARANCE**

NOW BEFORE THIS TRIBUNAL comes undersigned counsel, who respectfully introduces student attorneys Caroline Wick and Matthew Landry to this tribunal as authorized to practice under Supreme Court Rule XX. As Ms. Wick and Mr. Landry's supervising attorney, I approve of their appearance in this matter on behalf of the Town of Abita Springs. The Town's written consent to representation by a student attorney in this matter is attached.

Respectfully submitted on November 12, 2014,



Lisa W. Jordan, LA Bar # 20451
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Tulane Environmental Law Clinic
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New Orleans, Louisiana 70118
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Counsel for the Town of Abita Springs

CLIENT'S WRITTEN CONSENT FOR STUDENT ATTORNEY APPEARANCE

I hereby grant my consent for student attorneys from the Tulane Environmental Law Clinic to appear on my behalf in any matter in which the Tulane Environmental Law Clinic represents me, whether in Court or before an administrative tribunal.

Dated: 5/14/14

Town of Abita Springs

[signed:]
[name:]



Greg Lemon

[position:]

Mayor

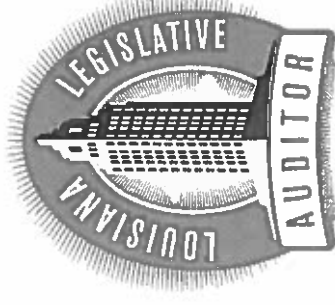
Performance Audit (May 2014)

Office of Conservation, DNR Oil and Gas Program

- **Concluded (among others):**
 - Does not perform appropriate routine inspections
 - Does not adequately enforce its rules
 - Rarely issues financial penalties
 - Does not deter future or ongoing violations
 - Does not have adequate bonding to close sites when operators walk away
 - Does not effectively identify inactive sites

REGULATION OF OIL AND GAS WELLS
AND MANAGEMENT OF ORPHANED WELLS

OFFICE OF CONSERVATION -
DEPARTMENT OF NATURAL RESOURCES



PERFORMANCE AUDIT
ISSUED MAY 28, 2014

STRONGER Audit (2010-2011)

- **State Review of Oil and Gas Environmental Regulations (STRONGER)**
- **Concluded (among others):**
 - **Surface casing not protective of groundwater (depth)**
 - **Casing cement standards insufficient for anticipated pressures**
 - **Spill prevention programs inadequate (180 days to prepare / 1 year to implement)**
 - **Staff insufficiently trained for fracturing**

Louisiana
Hydraulic Fracturing
State Review

March, 2011



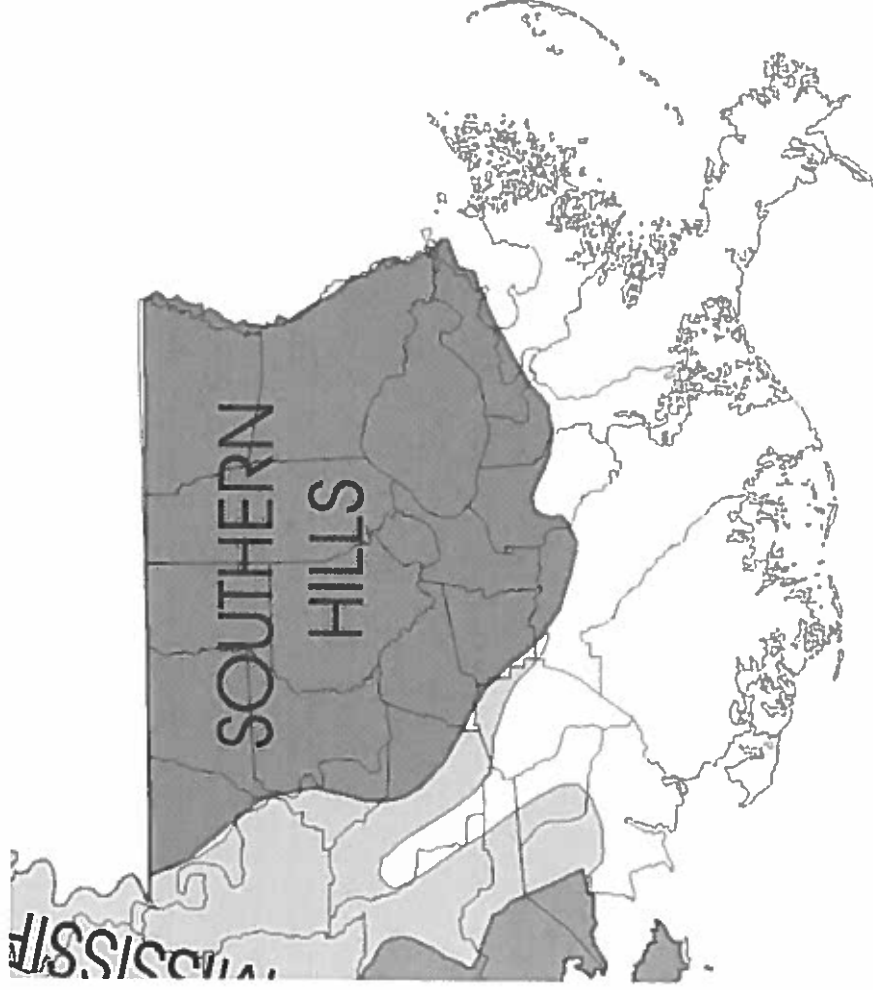
Regulations compared to industry standards

- American Petroleum Institute (API) standards for hydraulic fracturing and associated waste management
1. Hydraulic Fracturing Operations – Well Construction and Integrity Guidelines, HF1 (2009)
 2. Water Management Associated with Hydraulic Fracturing, HF2 (2010)
 3. Practices for Mitigating Surface Impacts Associated with Hydraulic Fracturing, HF3 (2011)

API Comparison

- Should avoid wetlands
- Formation pressure testing
- Depth of surface casing
- Mechanical integrity tests such as CBL, temperature logs on all casings, etc.
- Locate and test public, private water wells, lakes, etc.
- Baseline and post fracture monitoring
- Tracer tagging to confirm extent

Sole Source Aquifer



Water Withdrawals, St. Tammany

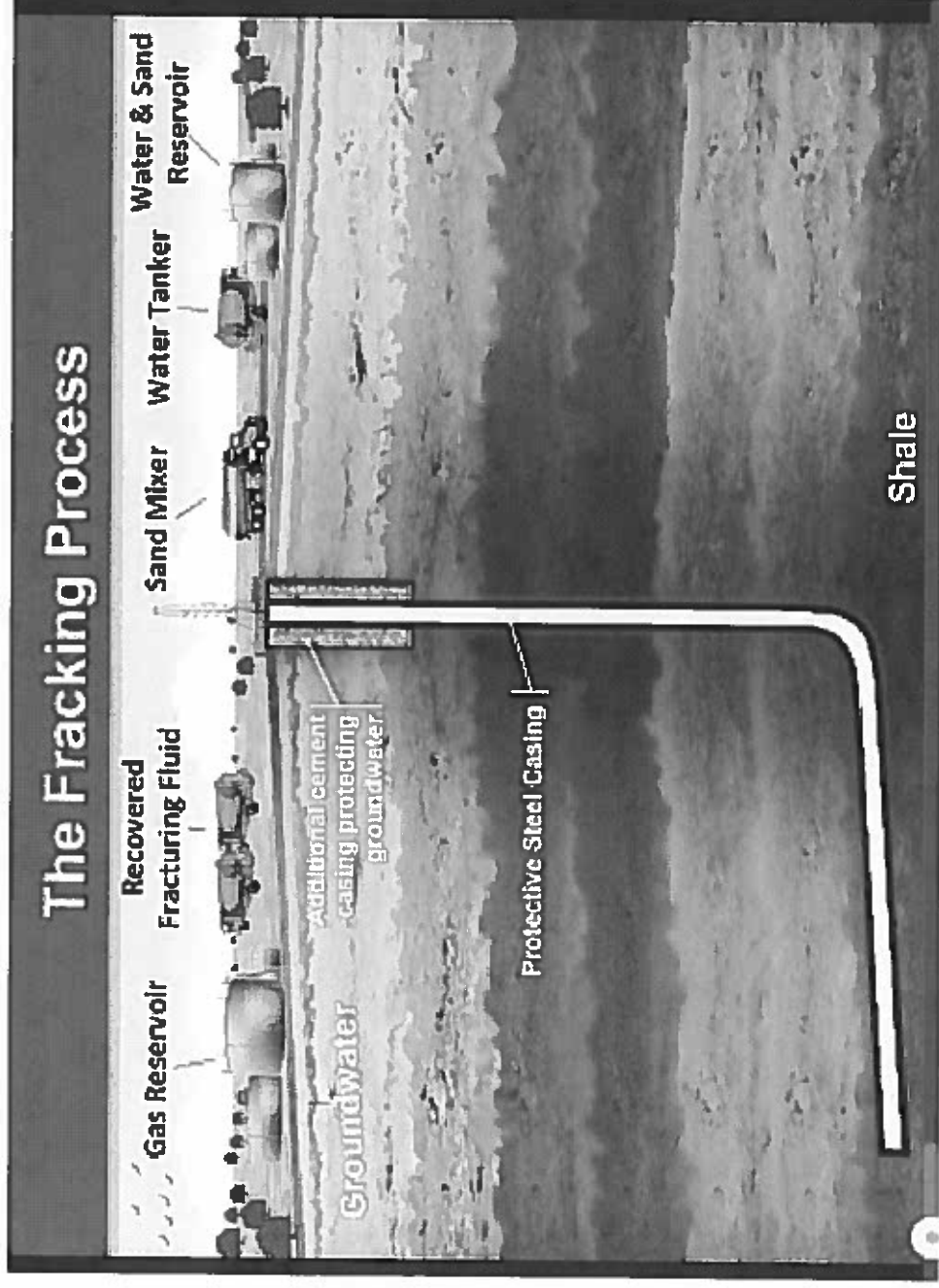
Table 1. Water withdrawals, in million gallons per day, by source in St. Tammany Parish, Louisiana, 2005 (Sargent, 2007).

Aquifer, aquifer system, or major water body	Groundwater	Surface water
Chicot equivalent aquifer system	5.99	
Evangeline equivalent aquifer system	12.32	
Jasper equivalent aquifer system	4.39	
Surface water bodies		0.06
Total	22.7	.06

Table 2. Water withdrawals, in million gallons per day, by category in St. Tammany Parish, Louisiana, 2005 (Sargent, 2007).

	Groundwater	Surface water	Total
Public supply	15.89	0	15.89
Industrial	.14	0	.14
Power generation	0	0	0
Rural domestic	6.44	0	6.44
Livestock	.06	.04	.11
Rice irrigation	0	0	0
General irrigation	.13	.01	.15
Aquaculture	.03	0	.03
Total	22.7	.06	22.76

Generalized Cross Section



Other Sources



Chemical Use

- 2,500 fracturing products
- 750 chemicals
- 29 carcinogens, SDWA, and / or HAPs
- Harmful: no smell, no taste, no visual



UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE
MINORITY STAFF
APRIL 2011

CHEMICALS USED IN HYDRAULIC FRACTURING

PREPARED BY COMMITTEE STAFF FOR:

Henry A. Waxman
Ranking Member
Committee on Energy
and Commerce

Edward J. Markey
Ranking Member
Committee on Natural
Resources

Diana DeGette
Ranking Member
Subcommittee on Oversight
and Investigations

Table 4-2: Estimated Concentrations of Diesel Combustion Products Affecting Their Concentrations

Point-of-Injection (POI) Calculation!					Step 1	Influence Well Vt
Recipe (gallons of gal for 1,000 gallons of water)	Chemical (MCL μg/L)	Fraction of Chemical in Diesel		Point-of-Injection Concentration (μg/L)?	Max	Min
		Min.	Max.			
4	Eerzan	0.000025	0.001	45	9 times MCL	to 1000 ft during its 10 year recovery (Palouse effect)
5	5		1880 times MCL	68	2,600	
10					4,400	
4	Shy benzene			120	1,500	
5			0.00007	180	5,200	
10	700			310	3,700	
4	Toluene			120	2,000	
5	1,000		0.000063	180	1,000	
10				300	31,000	
4	Xylene			330	1,000	
5			0.000102	600	1,000	
10	10,000			830	26,000	

[illegible]

and 40 percent of the total. The remaining 20 percent of the total is made up of the following:

Table 12. Chemical appearing most often in hydraulic fracturing in over 2,500 products reported by 14 hydraulic fracturing service companies as being used between 2005 and 2009. Reproduced from USHR (2011).

Chemical	No. of Products
Methanol	342
Isopropanol	274
Crystalline silica	207
2-Butoxyethanol	126
Ethylene glycol	119
Hydrotreated light petroleum distillates	89
Sodium hydroxide	80

Water Use in St. Tammany

- 10-mile radius from approximate middle of lease area.
- Over 4,700 water wells use for private homes (4,476), public supply (204), irrigation (80), Industrial (80)
- Depths ranged from 15 to 2,350 feet
- Assortment of sand aquifers

Leases in St. Tammany



Closing Comments Marianne Cufone, Counsel for Concerned Citizens of St Tammany.
November 12, 2014
DNR Hearing

My name is Marianne Cufone. I'm an environmental attorney representing the Concerned Citizens of St Tammany.

I want to take this opportunity to express thanks to everyone here tonight to those who came and had to leave and especially to those who have stayed in the spirit of sharing their thoughts and concerns regarding this very important matter in St. Tammany and well beyond.

Normally these hearings are routine – quick, easy and in Baton Rouge. But tonight – this hearing was here, in St Tammany Parish. About a mile from the site where drilling is proposed. In the very community that could be permanently and significantly altered by the proposed drilling project.

We asked for this hearing to be here tonight, so the people of St Tammany could hear exactly what Helis plans for the site and how in their opinion this is not a concern for this community. Clearly – this community is concerned – and therefore the DNR should be concerned.

DNR's Department of Conservation is tasked with conserving and regulating oil, gas, and lignite resources of the state. This responsibility, per State law, is to regulate exploration and production, control and allocate energy supplies and distribution; **and protect public safety and the environment.** No one charge is higher than the others. This means that the DNR is equally responsible to conserve, regulate and **protect.** Many people of St Tammany Parish came here today to highlight that they expect you to protect them by doing the job our state has given you.

Part of that protection is having a meaningful review of a permit application. We are appreciative that this was here in St Tammany – but we significantly question whether this could be a fair full hearing on the merits of the project. The general attitude about this hearing was reflected in the way it was presented (Helis Oil, the DNR and Parish officials invited us to attend the hearing we asked for – all of them together). The set up wasn't given much thought– we had to ask for clarification on how people would be called to speak – how the room would be set up – we had to bring a speaker system - Abita Springs brought what they had and I brought my own personal system to attempt to provide public access to what would be said during this hearing.

We are concerned about the detail of review for this permit and we specifically hereby request that the 5 issues LA agencies must address under the Save Ourselves case holding

be reviewed and discussed by DNR well prior to making a decision on this permit – specifically:

1. have potential and real adverse environmental effects of the proposed project been avoided to the maximum extent possible?
2. Does a cost benefit analysis of environmental impact costs v. social and economic benefit of the project show the later outweighs the former?
3. Are there alternate projects which would offer more environmental protection?
4. Are there alternate sites that would offer more environmental protection?
5. Are there mitigating measures that could offer more environmental protection?

These are all significant matters that must be considered.

Helis's team says that the company has drilled so many wells already, 100 in LA, and even into the aquifer. So what? This well is here in St Tammany, it is unique and must be reviewed and discussed as unique because it is the first well in St Tammany where they plan to use hydraulic fracturing. The site is about a mile from this high school. Helis discounts this because the site isn't less than ½ a mile. Again I say – so what? There is a high school filled with students and teachers and staff of this Parish, very nearby the drilling site. Why don't they all matter? Helis's team says that opponents (that's us) don't want any drilling and want this project stopped. Then they go on to say – they will not stop. This is telling about what kind of neighbors Helis will be and how they regard the concerns of this community. This is all problematic.

In sum, Abita Springs and Concerned Citizens of St Tammany are greatly concerned by this drilling proposal – the evidence submitted tonight by Helis's team was not what I, as an attorney, consider evidence – it was more an attempt at a persuasive presentation. I hope you weren't persuaded. The colorful maps, pictures, charts and promises are only just those things and nothing more - prepared by the company to show what they want to show and not in any way legally enforceable documents.

The **real** crux of the matter that must be discussed and decided is whether this proposal is contrary to the public interest. We submit that it is for many reasons: For being in violation of existing zoning, for raising risks to public health and contamination to water, air and our environment. This is not a matter to take lightly. We ask that DNR do as they are charged and protect the people and environment. We appreciate your thoughtful consideration.